

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An isolated nucleic acid molecule encoding a BEL transcription factor from *Solanum tuberosum*, wherein said isolated nucleic acid molecule:

(a) comprises [[a]] ~~the nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13;~~ or

(b) comprises a nucleotide sequence that ~~is at least 90% similar to a nucleotide sequence selected from the group consisting has at least 90% sequence homology to the nucleotide sequence~~ of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13~~, and that encodes a protein ~~or polypeptide~~ that comprises an amino acid sequence ~~having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14~~ by basic BLAST using default parameters analysis; or

(c) hybridizes to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour; or

(d) encodes a protein or polypeptide comprising ~~an~~ ~~the~~ amino acid sequence ~~selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.~~

2. (Currently Amended) The isolated nucleic acid molecule according to claim 1, wherein the nucleic acid molecule has [[a]] ~~the nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13.~~

3. (Currently Amended) The isolated nucleic acid molecule according to claim 1, wherein the nucleic acid molecule comprises a nucleotide sequence that is at least 90% similar to a nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13, and that encodes a protein or polypeptide that comprises an amino acid sequence having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14 by basic BLAST using default parameters analysis.

4. (Currently Amended) The isolated nucleic acid molecule according to claim 1, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13 under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

5. (Currently Amended) The isolated nucleic acid molecule according to claim 1, wherein the nucleic acid molecule encodes a protein or polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.

Claim 6 (Canceled)

7. (Original) A DNA construct comprising:
the nucleic acid molecule according to claim 1, and
an operably linked promoter and 3' regulatory region.

8. (Original) An expression vector comprising the DNA construct of claim 7.

9. (Original) The expression vector according to claim 8, wherein the nucleic acid molecule is in proper sense orientation and correct reading frame.

10. (Original) A host cell transduced with the nucleic acid molecule according to claim 1.

11. (Previously Presented) The host cell according to claim 10, wherein the cell is selected from the group consisting of a bacterial cell, a virus, a yeast cell, an insect cell, a plant cell, and an isolated mammalian cell.

12. (Original) A transgenic plant transformed with the nucleic acid molecule according to claim 1.

13. (Currently Amended) The transgenic plant according to claim 12, wherein the nucleic acid molecule has [[a]] the nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13.

14. (Currently Amended) The transgenic plant according to claim 12, wherein the nucleic acid molecule comprises a nucleotide sequence that is at least 90% similar to a nucleotide sequence selected from the group consisting of has at least 90% sequence homology to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13, and that encodes a protein or polypeptide that comprises an amino acid sequence having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14 by basic BLAST using default parameters analysis.

15. (Currently Amended) The transgenic plant according to claim 12, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

16. (Currently Amended) The transgenic plant according to claim 12, wherein the nucleic acid molecule encodes a protein or polypeptide comprising ~~an~~ the amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:2, ~~SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14~~.

Claim 17 (Canceled)

18. (Original) The transgenic plant according to claim 12, wherein the plant is selected from the group consisting of Gramineae, Liliaceae, Iridaceae, Orchidaceae, Salicaceae, Ranunculaceae, Magnoliaceae, Cruciferae, Rosaceae, Leguminosae, Malvaceae, Umbelliferae, Labiate, Solanaceae, Cucurbitaceae, Compositae, and Rubiaceae.

19. (Original) A transgenic plant seed transformed with the nucleic acid molecule according to claim 1.

20. (Currently Amended) The transgenic plant seed according to claim 19, wherein the nucleic acid molecule has [[a]] the nucleotide sequence ~~selected from the group consisting of~~ SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13~~.

21. (Currently Amended) The transgenic plant seed according to claim 19, wherein the nucleic acid molecule comprises a nucleotide sequence that ~~is at least 90% similar to a nucleotide sequence selected from the group consisting of~~ has at least 90% sequence homology to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13~~, and that encodes a protein or polypeptide that comprises an amino acid sequence ~~having a homeodomain region, a SKY~~

~~box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10.~~

22. (Currently Amended) The transgenic plant seed according to claim 19, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

23. (Currently Amended) The transgenic plant seed according to claim 19, wherein the nucleic acid molecule encodes a protein or polypeptide comprising ~~an~~ the amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:2, ~~SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.~~

Claim 24 (Canceled)

25. (Original) The transgenic plant seed according to claim 19, wherein the plant seed is selected from the group consisting of Gramineae, Liliaceae, Iridaceae, Orchidaceae, Salicaceae, Ranunculaceae, Magnoliaceae, Cruciferae, Rosaceae, Leguminosae, Malvaceae, Umbelliferae, Labiate, Solanaceae, Cucurbitaceae, Compositae, and Rubiaceae.

Claims 26-42 (Canceled)

43. (Previously Presented) A method for increasing rate of growth of a plant comprising:

transforming a plant with the DNA construct according to claim 7, whereby the rate of growth of the plant is increased.

44. (Currently Amended) The method according to claim 43, wherein the nucleic acid molecule has [[a]] the nucleotide sequence selected from the group consisting of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13.~~

45. (Currently Amended) The method according to claim 43, wherein the nucleic acid molecule comprises a nucleotide sequence that is at least 90% similar to a nucleotide sequence selected from the group consisting of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13,~~ and that encodes a protein that comprises an amino acid sequence having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14 by basic BLAST using default parameters.

46. (Currently Amended) The method according to claim 43, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

47. (Currently Amended) The method according to claim 43, wherein the nucleic acid molecule encodes a protein or polypeptide comprising ~~an~~ the amino acid sequence selected from the group consisting of SEQ ID NO:2, ~~SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.~~

Claim 48 (Canceled)

49. (Original) The method according to claim 43, wherein the plant is selected from the group consisting of Gramineae, Liliaceae, Iridaceae, Orchidaceae, Salicaceae, Ranunculaceae, Magnoliaceae, Cruciferae, Rosaceae, Leguminosae, Malvaceae, Umbelliferae, Labiate, Solanaceae, Cucurbitaceae, Compositae, and Rubiaceae.

Claims 50-56 (Canceled)

57. (Currently Amended) The DNA construct according to claim 7, wherein the nucleic acid molecule has [[a]] ~~the nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13.~~

58. (Currently Amended) The DNA construct according to claim 7, wherein the nucleic acid molecule comprises a nucleotide sequence that ~~is at least 90% similar to a nucleotide sequence selected from the group consisting of~~ ~~has at least 90% sequence homology to the nucleotide sequence of~~ SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13,~~ and that encodes a protein ~~or polypeptide~~ that comprises an amino acid sequence ~~having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either~~ ~~that has at least 90% sequence homology to the amino acid sequence of~~ SEQ ID NO:2, ~~SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14~~ by basic BLAST using default parameters.

59. (Currently Amended) The DNA construct according to claim 7, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

60. (Currently Amended) The DNA construct according to claim 7, wherein the nucleic acid molecule encodes a protein or polypeptide comprising ~~an the~~ amino acid sequence ~~selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.~~

61. (Currently Amended) The expression vector according to claim 8, wherein the nucleic acid molecule has [[a]] ~~the~~ nucleotide sequence ~~selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13.~~

62. (Currently Amended) The expression vector according to claim 8, wherein the nucleic acid molecule comprises a nucleotide sequence that ~~is at least 90% similar to a nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13,~~ and that encodes a protein or polypeptide that comprises an amino acid sequence ~~having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14 by basic BLAST using default parameters.~~

63. (Currently Amended) The expression vector according to claim 8, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

64. (Currently Amended) The expression vector according to claim 8, wherein the nucleic acid molecule encodes a protein or polypeptide comprising ~~an the~~ amino acid sequence ~~selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.~~

65. (Currently Amended) The host cell according to claim 10, wherein the nucleic acid molecule has [[a]] the nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13.

66. (Currently Amended) The host cell according to claim 10, wherein the nucleic acid molecule comprises a nucleotide sequence that ~~is at least 90% similar to a nucleotide sequence selected from the group consisting of~~ has at least 90% sequence homology to the nucleotide sequence of SEQ ID NO:1, ~~SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, and SEQ ID NO:13,~~ and that encodes a protein or polypeptide that comprises an amino acid sequence ~~having a homeodomain region, a SKY box, a BELL domain, and a VSLTLGL box that are at least 90% similar to the corresponding homeodomain regions, SKY boxes, BELL domains, and VSLTLGL boxes in either~~ that has at least 90% sequence homology to the amino acid sequence of SEQ ID NO:2, ~~SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, or SEQ ID NO:14~~ by basic BLAST using default parameters.

67. (Currently Amended) The host cell according to claim 10, wherein the nucleic acid molecule hybridizes to the nucleotide sequence of ~~SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:13~~ under high stringency conditions characterized by hybridization in a buffer of 4-5X SSC/0.1% w/v SDS at 54°C for 1-3 hours and in 4X SSC at 65°C, followed by a washing in 0.1X SSC at 65°C for about one hour.

68. (Currently Amended) The host cell according to claim 10, wherein the nucleic acid molecule encodes a protein or polypeptide comprising ~~an~~ the amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:2, ~~SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, and SEQ ID NO:14.~~